

(Booklet Back Cover)

Cotoran® 4L

HERBICIDE

For preemergence and postemergence weed control in cotton

Active Ingredient:

Fluometuron: 1,1-dimethyl-3-(α,α,α -trifluoro-*m*-tolyl) urea41.7%

Inert Ingredients:58.3%

Total:100.0%

Cotoran 4L contains 4 lbs. active ingredient per gallon.

Use entire contents at one time.

2 1/2 Gallons
U.S. Standard Measure

EPA Reg. No. 100-642
EPA Est. No. 32761-MO-3

See directions for use in attached booklet.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

Precautionary Statements

Hazards to Humans and Domestic Animals

Harmful if swallowed, inhaled, or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist.

First Aid: In case of contact with eyes, immediately flush with plenty of water. Get medical attention if irritation occurs. In case of contact with skin, wash thoroughly with soap and water. Get medical attention if irritation occurs. If swallowed, drink water and induce vomiting by placing fingers at back of throat. Immediately contact a physician, hospital, or local Poison Control Center. In case of inhalation exposure, move from the contaminated area.

Note to Physician: If Cotoran 4L is ingested, lavage stomach or induce vomiting. A slurry of activated charcoal in water can be left in the stomach. Give a saline laxative and supportive therapy.

Environmental Hazards

This chemical is known to leach through soil into ground water under certain conditions, as a result of registered uses. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters.

Do not apply this product through any type of irrigation system.


Cotoran® trademark of Ciba-Geigy Corporation

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Ciba Crop Protection
Ciba-Geigy Corporation
Greensboro, North Carolina 27419

CGA 33L14F 015

	May 8, 1985
Revised	April 15, 1986
Revised	September 30, 1987
Revised	October 24, 1990
	(new graphics)
Revised	July 20, 1993
	(WPS)
Revised	January 24, 1995
	Add GW, delete CA,
	other minor changes.)

	United States Environmental Protection Agency Washington, DC 20460	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other	OPP Identifier Number 247531
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Application for Pesticide - Section I

1. Company/Product Number 100-642	2. EPA Product Manager Taylor	3. Proposed Classification <input type="checkbox"/> None <input checked="" type="checkbox"/> Restricted
4. Company/Product (Name) Cotoran® 4L		6. Expedited Review , In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____
5. Name and Address of Applicant (Include ZIP Code) Ciba Crop Protection P. O. Box 18300 Greensboro, NC 27419 <input type="checkbox"/> Check if this is a new address		

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification (PR Notice 95-2): Add crop injury advisory.

BEST AVAILABLE COPY

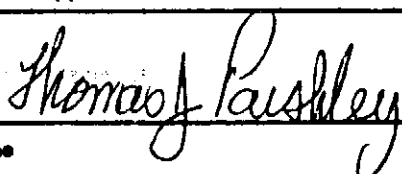
Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No			
Certification must be submitted		If "Yes" Unit Packaging wgt. _____ No. per container _____	If "Yes" Package wgt _____ No. per container _____	<input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			<input type="checkbox"/> Other _____		

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application)

Name Thomas J. Parshley	Title Senior Regulatory Manager	Telephone No. (Include Area Code) 910-632-7207
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Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.	6. Date Application Received (Stamped)
2. Signature 	3. Title Senior Regulatory Manager
4. Typed Name Thomas J. Parshley	5. Date 9-18-95

WPS
(Booklet Front Panel)

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weed control in cotton

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ingredient per gallon.

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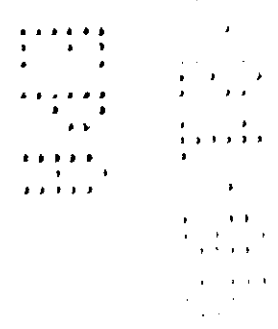
KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements
and directions for use inside booklet.

EPA Reg. No. 100-642
EPA Est. 32761-MO-3

CGA 33L14F 015



DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire **Directions for Use** and the **Conditions of Sale and Warranty** before using this product. If terms are not acceptable, return the unopened product container at once.

Conditions of Sale and Warranty

The **Directions for Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of Ciba-Geigy or the Seller. All such risks shall be assumed by the Buyer.

Ciba-Geigy warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions for Use** subject to the inherent risks referred to above. **Ciba-Geigy makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall Ciba-Geigy or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.** Ciba-Geigy and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing **Conditions of Sale and Warranty**, which may be varied only by agreement in writing signed by a duly authorized representative of Ciba-Geigy.

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DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours. Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or neoprene rubber or polyvinyl chloride (PVC) or viton
- Shoes plus socks

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR WEED CONTROL, AND/OR ILLEGAL RESIDUES.

Do not apply this product through any type of irrigation system.

General Information

Cotoran 4L is effective for both annual grass and annual broadleaf weed control in cotton.

Weed Control

Cotoran 4L applied according to directions will selectively control annual weeds in cotton, such as:

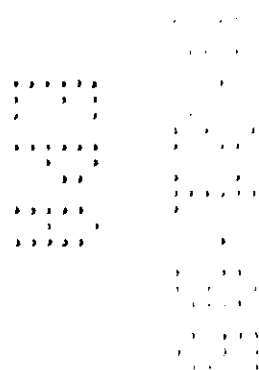
Annual Grass Weeds

- | | |
|---------------|-----------------------------------|
| barnyardgrass | foxtail |
| crabgrass | goosegrass |
| crowfootgrass | ryegrass |
| fall panicum | signalgrass (<i>Brachiaria</i>) |

Annual Broadleaf Weeds

- | | |
|-----------------------|------------------------|
| buttonweed | prickly sida (teaweed) |
| cocklebur | purslane |
| Florida pusley | ragweed |
| groundcherry (Wright) | sesbania |
| jimsonweed | sicklepod |
| lambsquarters | smartweed |
| morningglory | tumbleweed |
| pigweed | |

Cotoran 4L at rates up to 4 pts./A in cotton is not effective for the control of established perennial weeds, such as johnsongrass from rhizomes.



Band Treatment

For band treatment, calculate the amount of Cotoran 4L needed by the formula:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

Cotton

Cotoran 4L may be applied as a preemergence treatment to the surface of the soil, or lightly incorporated immediately after planting, or as a directed, semi-directed, or over-the-top postemergence application. For preemergence treatment only, Cotoran 4L may be tank-mixed with most liquid nitrogen fertilizers. Cotoran 4L may be combined with other herbicides in cotton as directed in the **Combinations** section.

Cotoran 4L is most effective when used as follows:

1st Application: Preemergence broadcast. See **Preemergence Treatment** section.

2nd Application: Postemergence, directed, semi-directed, or over-the-top when cotton is 3-6 inches high. See **Postemergence Treatment** section.

3rd Application: If needed, postemergence, directed, or semi-directed, at lay-by (last normal cultivation), using no more than 2 pts./A.

Preemergence Treatment

Apply Cotoran 4L at a rate of 2-4 pts./A. On light silt and sandy soils, low in organic matter, use the lower rate.

Cotoran 4L may be applied to the surface of the soil, or lightly incorporated into the soil, after planting cotton.

Preplant Incorporated Use (AZ and NM)

Cotoran 4L may be applied preplant as a broadcast spray at 3.2 pts./A after the beds for preplant irrigation have been formed. Apply before the beds are dragged off (using a bed shaper set to remove 1-2 inches from beds) in preparation for planting. Furrow irrigation should precede the application and planting should follow as soon as possible. Plant into untreated soil after drag-off and return treated soil to the beds when furrows are reformed. Do not allow furrow irrigation water to pond over the beds.

Postemergence Treatments

Cotoran 4L may be applied postemergence to cotton, but preemergence to weeds, or postemergence to both cotton and weeds. Cotoran 4L should be applied at rates of 2-4 pts./A. Apply as a directed, semi-directed, or over-the-top spray. Cotoran 4L may be applied to cotton plants at any stage of growth from 3 inches high to lay-by. Use the higher rate when applying postemergence to weeds; weeds should be 2 inches high or less. Use of a surfactant that is approved by FDA for use on food and feed crops and is compatible with Cotoran 4L when applied to cotton, may enhance the postemergence herbicidal activity of Cotoran 4L. The surfactant rate should not exceed 0.5% of the carrier volume (1 pt./25 gals. of water).

Precautions: Rainfall that is sufficient to germinate seeds or for growing crops is adequate to activate the herbicidal activity of Cotoran 4L; where dry weather conditions prevail, the herbicidal activity of Cotoran 4L may be delayed or reduced. Cultivate if weeds develop.

Do not make more than 3 applications of Cotoran 4L to the same crops or field in any 1 year. Do not plant crops other than cotton within 6 months of the last application of Cotoran 4L, or injury may result.

The use of Cotoran (any application method) in conjunction with a systemic insecticide at planting may result in injury to cotton. In addition, Cotoran applied to cotton with any application of Command (clomazone) herbicide may result in crop injury. Ciba-Geigy Corporation will not be held responsible for losses or damage resulting from such uses.

Wes TX only: Do not use Cotoran 4L on sandy, loamy sand, or fine sandy loam soils. Do not use Cotoran 4L on cotton planted in furrows.

AR, LA, and MS only: Use 1.6 pts. of Cotoran 4L per acre on sandy loam soils low in organic matter.

AZ and NM only: Cotton, corn, and grain sorghum can be planted the next spring. Do not plant treated areas to other crops until 1 year after last application. Do not use on sandy or coarse-textured soil of less than 1% organic matter.

Note: Do not apply within 60 days of harvest. Do not feed foliage from treated cotton plants or gin trash to livestock.

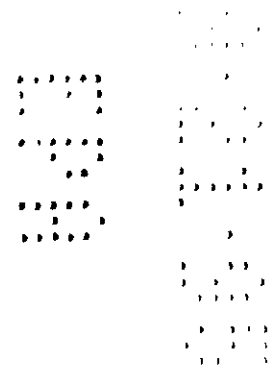
Combinations

Dual® 8E: Use in a tank mixture with Cotoran 4L preemergence in cotton for control of all weeds as listed on both labels. This combination will also control spotted spurge, hyssop spurge, nodding spurge, and prostrate spurge. Apply to the soil surface at planting or after planting, but before weeds or crop emerge, using the appropriate rates from the following table.

Cotoran 4L + Dual 8E - Cotton (AR, LA, MS, Eastern OK, TN, Bootheel of MO, Gulf Coast, Rio Grande Valley, and Eastern TX)

Soil Texture	Broadcast Rates Per Acre	
	Cotoran 4L	Dual 8E
Sand, loamy sand	DO NOT USE	
Sandy loam*	2 pts.	1.25-1.5 pts.
Loam, silt, silt loam	2-3.2 pts.	1.5-2 pts.
Silty clay loam, sandy clay loam, silty clay, sandy clay, clay loam, clay	3.2-4 pts.	2 pts.

*Use on sandy loam soils only in eastern OK, Gulf Coast, Rio Grande Valley, and eastern TX.



10/1/12

Precautions: (1) Do not apply Cotoran 4L + Dual 8E on sand or loamy sand soils or in areas where water is likely to "pond" over the bed, or crop injury may occur. (2) Do not apply broadcast to furrow-planted cotton. (3) The use of Cotoran (any application method) in conjunction with a systemic insecticide at planting may result in injury to cotton. In addition, Cotoran applied to cotton with any application of Command (clomazone) herbicide may result in crop injury. Ciba-Geigy Corporation will not be held responsible for losses or damage resulting from such uses. (4) Do not use on Taloka silt loam, or crop injury may occur.

Refer to the Dual 8E label for further instructions, precautions, and limitations.

Note: Do not feed treated forage or gin trash to livestock, or graze treated areas.

Rotational Crops: Refer to the crop rotation instructions for Cotoran 4L alone on this label and for Dual 8E alone on the Dual 8E label.

Treflan® EC: Use in a tank mixture with Cotoran 4L (all areas except AZ) or before an overlay with Cotoran 4L in cotton for control of all weeds listed on both labels.

For the **tank mixture**, follow soil preparation and incorporation procedures for Treflan EC. Apply Cotoran 4L + Treflan EC tank mix at rates specified below in a minimum of 15 gals. of water per acre.

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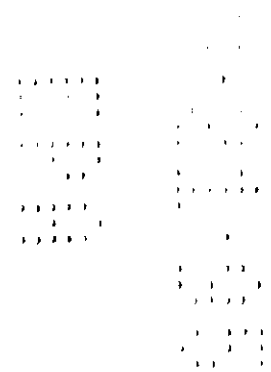
Cotoran 4L + Treflan EC Tank Mixture - Cotton (All areas except AZ)

Soil Texture	Broadcast Rates Per Acre	
	Cotoran 4L	Treflan EC
Sand, loamy sand, sandy loam	2 pts.	1 pt.
Loam, silty clay loam*, silt loam, silt, sandy clay loam*	3.2 pts.	1.5 pts.
Clay, clay loam, silty clay loam*, silty clay, sandy clay, sandy clay loam*	4 pts.	2 pts.

*Silty clay loam and sandy clay loam are transitional soils. If these soils are predominantly sand or silt, they are usually classified as *medium-textured soils*. If predominantly clay, they are classified as *fine-textured soils*.

For the **overlay**, apply Cotoran 4L as a preemergence soil surface treatment as recommended on this label at 2-4 pts./A after a preplant soil incorporated treatment of Treflan EC. Apply Treflan EC as recommended on its label at 1-2.5 pts./A.

Precaution: Do not use the tank mix in AZ. Do not apply the tank mix of Cotoran 4L + Treflan EC in liquid fertilizer. Refer to the Treflan EC label for directions, precautions, and limitations for use of that product, as well as the directions, precautions, and limitations on this Cotoran 4L label.



Prowl®: Apply Cotoran 4L as a preemergence surface treatment as recommended on this label at 2-4 pts./A after a preplant soil-incorporated treatment of Prowl for control of all weeds listed on both labels. Apply Prowl as recommended on its label at 1-3 pts./A. Refer to the Prowl label for directions, precautions, and limitations for use of that product.

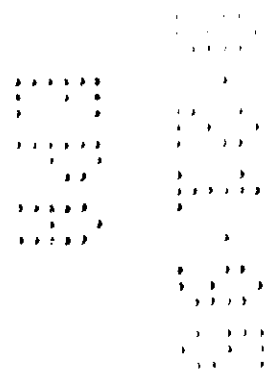
DSMA or MSMA: Cotoran 4L may be tank-mixed with DSMA or MSMA and applied as a directed spray to cotton from 3 inches high to first bloom. Use the broadcast rate of 2-4 pts. of Cotoran 4L per acre and the necessary amount of DSMA or MSMA plus 0.5% (1 pt./25 gals.) of a surfactant that is approved by FDA for use on food and feed crops and is compatible with Cotoran 4L + DSMA or Cotoran 4L + MSMA when applied to cotton. When using this mixture, do not allow spray to contact cotton foliage. Do not graze treated areas or feed treated forage or gin trash to livestock. Adhere strictly to the dosage, precautions, and limitations of the labels of the products.

Storage and Disposal

Do not contaminate water, food, or feed by storage or disposal. Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of federal law. If these wastes cannot be used according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in proper disposal methods.

Triple rinse container (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. Stay out of smoke from burning jugs.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.



Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Harmful if swallowed, inhaled, or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist.

First Aid: In case of contact with eyes, immediately flush with plenty of water. Get medical attention if irritation occurs. In case of contact with skin, wash thoroughly with soap and water. Get medical attention if irritation occurs. If swallowed, drink water and induce vomiting by placing fingers at back of throat. Immediately contact a physician, hospital, or local poison control center. In case of inhalation exposure, move from the contaminated area.

Note to Physician: If Cotoran 4L is ingested, lavage stomach or induce vomiting. A slurry of activated charcoal in water can be left in the stomach. Give a saline laxative and supportive therapy.

Personal Protective Equipment

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category C on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or neoprene rubber or polyvinyl chloride (PVC) or viton
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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Engineering Control Statements

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Environmental Hazards

This chemical is known to leach through soil into ground water under certain conditions, as a result of registered uses. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters.

Cotoran® and Dual® trademarks of Ciba-Geigy Corporation

Compex® trademark of KALO Agricultural Chemicals, Inc.

Prowl® trademark of American Cyanamid

Treflan® trademark of DowElanco

Unite® trademark of HACO, Inc.

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CGA 33L14F 015

